

REMARKS

By the instant Preliminary Amendment, the specification has been revised to correct an apparent omission. That is, each of the revised compounds on pages 36-37 refers to the 2,4- locations, but inadvertently fails to specify that two of the trichloromethyl groups (hence the term "bis") are located at such positions. The revisions also use only the chemical name which uses "methylenedioxyphenyl" rather than "piperonyl".

The instant Preliminary Amendment also eliminates all multiple dependency while adding dependent claims 11-18 so that the scope of the original claims is preserved. It is to be understood that the revisions to the claims are solely for formalistic purposes and not with regard to patentability.

Favorable consideration on the merits is respectfully requested.

Respectfully submitted,

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Page 34, Line 14, to page 37, Line 11

The photopolymerization initiator includes, for example, carbonyl compounds such as benzophenone, 4-methylbenzophenone, 4,4'-dichlorobenzophenone, 2,4,6-trimethylbenzophenone, methyl o-benzoylbenzoate, 4-phenylbenzophenone, 4-(4-methylphenylthio)benzophenone, 3,3-dimethyl-4-methylbenzophenone, 4-(1,3-acryloyl-1,4,7,10,13-pentaoxatridecyl)benzophenone, 3,3',4,4'-tetra(tert-butylperoxycarbonyl) benzophenone, 4-benzoyl-N,N,N-methylbenzenemethanaminium chloride, 2-hydroxy-3-(4-benzoylphenoxy)-N,N,N-trimethyl-1-propanaminium chloride, 4-benzoyl-N,N-dimethyl-N-[(2-(1-oxo-2-propenoxy)ethyl)benzenemethanaminium chloride, 4-benzoyl-N,N-dimethyl-N-[2-(1-oxo-2-propenyloxy)ethyl]-benzenemethanaminium bromide, 2-isopropylthioisopropylthioxanthone, 4-isopropylthioxanthone, 2,4-dimethylthioxanthone, 2,4-diethylthioxanthone, 2,4-diisopropylthioxanthone, 2,4-dichlorothioxanthone, 1-chloro-4-propoxythioxanthone 2-hydroxy-3-(3,4-dimethyl-9-oxo-9H-thioxanthone-2-yloxy)-N,N,N-trimethyl-1-propanaminium chloride, 2-benzoylmethylene-3-methylnaphtho(1,2-d)thiazoline; dicarbonyl compounds such as benzyl, 1,7,7-trimethyl-bicyclo[2,2,1]heptane-2,3-dione (common name: camphorquinone), 2-methylantraquinone, 2-ethylantraquinone, 2-tert-butylantraquinone, 1-chloroanthraquinone, 2-amylantraquinone, 9,10-phenanthlenequinone, methyl a-oxobenzene acetate; acetophenone compounds such as acetophenone, 2-hydroxy-2-methyl-1-phenylpropan-1-one, 1-(4-isopropylphenyl)-2-hydroxy-2-methylpropan-1-one, 1-[4-(2-hydroxyethoxy)phenyl]-2-

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hydroxy-2-methylpropan-1-one, 1-hydroxycyclohexylphenylketone,
dimethoxyacetophenone, diethoxyacetophenone, 2,2-dimethoxy-1,2-diphenylethan-1-one,
2,2-diethoxy-1,2-diphenylethan-1-one, 1,1-dichloroacetophenone, N,N-
dimethylaminoacetophenone, 2-methyl-1-(4-methylthiophenyl)-2-morpholinopropan-1-one,
2-benzyl-2-dimethylamino-1-(4-morpholinophenyl)butan-1-one, 1-phenyl-1,2-propanedione-
2-(o-ethoxycarbonyl)oxym, 3,6-bis(2-methyl-2-morpholinopropanoyl)-9-butylcarbazole;
benzoin and benzoin ether compounds such as benzoin methyl ether,
benzoin ethyl ether, benzoin isopropyl ether, benzoin -n-butyl ether, benzoin isobutyl
ether; aryl phosphine oxide compounds such as 2,4,6-trimethylbenzoyldiphenylphosphine
oxide, bis(2,6-dichlorobenzoyl)-(4-n-propylphenyl)phosphine oxide; aminocarbonyl
compounds such as methyl 4-dimethylaminobenzoate, ethyl 4-dimethylaminobenzoate, 4-
dimethylaminobenzoate-n-butoxyethyl ester, isoamyl 4-dimethylaminobenzoate, benzoate-2-
dimethylaminoethyl ester, 4,4'-bis(dimethylamino)benzophenone (Michler's ketone), 4,4'-
bis(diethylamino)benzophenone, 2,5'-bis(4-dimethylaminobenzal)cyclopentanone;
halogenated compounds such as 2,2,2-trichloro-1-(4'-tert-butylphenyl)ethan-1-one, 2,2-
dichloro-1-(4-phenoxyphenyl)ethan-1-one, a,a,a-tribromomethylphenylsulfone, 2,4,6-
tris(trichloromethyl)triazine, [2,4-trichloromethyl-6-(4-methoxyphenyl)triazine, 2,4-
trichloromethyl-6-(4-methoxystyryl)triazine, 2,4-trichloromethyl-6-piperonyl-triazine (i.e.,
3,4-methylenedioxyphenyl triazine), 2,4-trichloromethyl-6-(4-methoxynaphthyl)triazine,
2,4-trichloromethyl-6-[2-(5-methylfuryl)etyldiyne]triazine, 2,4-trichloromethyl-6-[2-

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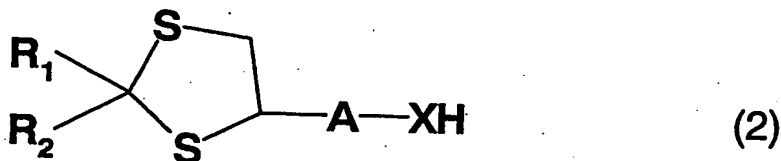
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Marked-up Claims 3, 6, and 8

3. (Amended) A polymerizable composition comprising the acrylic ester compound according to claim [1 or] 2.

6. (Amended) A manufacturing method of the acrylic ester compound according to claim [1 or] 2, wherein a sulfur-containing compound represented by the general formula (2) is esterified to form an acrylic ester:



wherein, R₁ and R₂ represent independently a hydrogen atom, an alkyl group which may have a substituent, an aromatic alkyl group which may have a substituent or an aromatic residue which may have a substituent, respectively; A represents a divalent organic group; and X represents a sulfur atom or an oxygen atom; provided that when X is an oxygen atom, R₁ represents an aromatic residue that may have a substituent.

8. (Amended) The manufacturing [methods] method according to claim [6 or] 7, wherein esterification to form an acrylic ester is performed by reacting the compound represented by the general formula (2) with halopropionic acids or acid halides thereof to form a halopropionic acid compound and then by dehalogenating the halopropionic acid compound.